

Notice of Allowability

Application No.

10/811,557

Examiner

BLAKE RUBIN

Applicant(s)

MOTT ET AL.

Art Unit

2457

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/29/09.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 7/2/09
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/ARIO ETIENNE/
Supervisory Patent Examiner, Art Unit 2457

DETAILED ACTION

Election/Restrictions

1. This application is in condition for allowance except for the presence of claims 13-39, directed to inventions non-elected without traverse.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anthony Jones on July 13, 2009.

The application has been amended as follows:

Specification, Page 7, lines 1-8:

particularly, the methods described herein may be implemented by a series of computer-executable instructions residing on a suitable computer-readable medium. Suitable computer-readable media may include storage media such as volatile (e.g. RAM) and/or non-volatile (e.g. ROM, disk) memory; and communication media such as carrier waves and transmission media (e.g. copper wires, coaxial cable, fiber optic media). Exemplary carrier waves may take the form of electrical, electromagnetic or

optical signals conveying digital data streams along a local network, a publicly accessible network such as the Internet or some other communication link.

Claim 12. (Currently Amended) A computer readable storage medium storing instructions that, when executed by a computer, cause the computer to perform a method of processing traffic received from an InfiniBand node via a first queue pair, the method comprising:

selecting a traffic entry in an InfiniBand receive queue, wherein said traffic entry comprises one of:

- a Send command comprising an encapsulated communication;
- a Send command comprising an RDMA Read descriptor; and
- an RDMA Read response comprising a response to an RDMA Read request;

if said selected traffic entry comprises a Send command comprising an RDMA Read descriptor:

- issuing a first RDMA Read request to retrieve one or more portions of a communication described by said RDMA Read descriptor;

- in a linked list corresponding to the first queue pair, adding an entry corresponding to said first RDMA Read request, said entry comprising a first sequence number corresponding to a first expected response to said first RDMA Read request and a last sequence number corresponding to a last expected response to said first RDMA Read request, and optionally

comprising a sequence number of the most recently received response or a link to the next entry in the linked list; and

in a retry queue, adding an entry corresponding to said first RDMA Read request; and

if said selected traffic entry comprises an RDMA Read response to said first RDMA Read request:

identifying a sequence number associated with said RDMA Read response;

comparing said sequence number to said range of sequence numbers;

storing said one or more portions of said described communication to facilitate assembly of said described communication in said queue; and

if said sequence number matches a final sequence number in said range, retiring in said retry queue said entry corresponding to said first RDMA Read request.

REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance of claims 1-12:
- The features of claims 1 & 12 were not found to be taught or suggested by the prior art. Specifically,

In a linked list corresponding to the first queue pair, adding an entry corresponding to the first RDMA Read request, said entry comprising a first sequence number corresponding to a first expected response to said first RDMA Read request and a last sequence number corresponding to a last expected response to said first Read request.

Particularly, pointing to the end of the sequence of the request via a last *expected* response.

Claims 2-11 are dependent off of claim 1, and are therefore distinguishable over the prior art for the reasons above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLAKE RUBIN whose telephone number is (571) 270-3802. The examiner can normally be reached on M-R: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/13/09

/Rubin Blake/
Examiner, Art Unit 2457

/ARIO ETIENNE/
Supervisory Patent Examiner, Art Unit 2457